

Association between Metabolic Syndrome and Premicroalbuminuria among Iranian Women with Polycystic Ovary Syndrome: A Case Control Study

Met Syn. and Premicroalbuminuria in PCOS

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Abstract

Objective: The aim of this study was to assess the association between premicroalbuminuria and metabolic syndrome in women with Polycystic Ovary Syndrome (PCOS).

Methods: In this case – control study, we analyzed the medical records of 78 women from an endocrinology outpatient center of Buali university hospital Qazvin city in Iran during 2008 to 2010. Anthropometric characteristics, Albumin/Creatinine Ratio (ACR), Lipid profile, Liver enzyme concentration, and occurrence of metabolic syndrome were compared between the two groups. Premicroalbuminuria was defined as ACR>7mg/g.

Results: Mean age of patients with PCOS was 27.2± 2.5 years and mean age of 63 controls was 26.9±2.4 years. Premicroalbuminuria was found in 53.8% of PCOS and 33.3% of control group (p value=0.015). Again, patients with PCOS divided in two groups: ACR>7mg/g and ACR<7mg/g. Higher serum levels of fasting insulin and glucose, blood pressure and more waist circumference were seen in PCOS patients with ACR>7mg/g. Fifty percent of patients with PCOS and ACR>7mg/g fulfilled criteria of metabolic syndrome; whereas no case of metabolic syndrome was found in PCOS patients with ACR<7mg/g.

Conclusions: Premicroalbuminuria is more prevalent in patients with PCOS compared to normal individuals. Metabolic syndrome is more frequently seen in patients with PCOS and premicroalbuminuria against patients with ACR<7mg/g.

Keywords: polycystic ovary syndrome, metabolic syndrome, premicroalbuminuria

1. Introduction

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in adult women (Azziz et al., 2004; Van Houten et al., 2012). About 6-8 percent of all women are diagnosed with PCOS in reproductive age (Patel, Bloomgarden, & Futterweit, 2008). PCOS is associated with insulin resistance attributable to ovarian hyperandrogenism. More than half of women with PCOS are obese or overweight that would predispose them to metabolic disorders including glucose resistance, type II diabetes and cardiovascular diseases (Ehrmann, 2005).